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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,573

08/22/2006

Terrence L. Blevins

06005/41113

8569

45372 7590 01/06/2009
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EXAMINER

SHECHTMAN, SEAN P

ART UNIT

PAPER NUMBER

2121

MAIL DATE

DELIVERY MODE

01/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,573	Applicant(s) BLEVINS ET AL.	
	Examiner Sean P. Shechtman	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-20 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Objection withdrawn.

Claim Objections

2. Objection withdrawn.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-4, 6-10, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the claims are directed to a system comprising a module and database, the module and database could reasonably be interpreted by one of ordinary skill in the art, in light of the instant specification (page 15, paragraph 33, pages 19-20, paragraph 39, page 44, paragraph 80, pages 56-57, paragraph 104, pages 83-84, paragraph 164, of the instant specification), to be software, such that the system comprising the module and database is software, per se. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,408,412 to Hogg et al, hereinafter referred to as Hogg (whole document).

Referring to claim 1, Hogg teaches a configuration system for configuring a process control system of a process plant (Col. 3, lines 52-60), the configuration system comprising:

a configuration database to store a configuration of the process control system (Col. 5, lines 35-64, flight data);

a process module stored in the configuration database (Col. 5, lines 35-64, flight data; Abstract, data includes signals indicative of operation of engine control system, and downloading flight data to diagnostic system which is an inference engine and knowledge database), the process module comprising a plurality of process objects, each process object representing a corresponding physical entity in the process plant (Abstract, data includes sensor data), the process module representing a logical unit in the process plant (Abstract, data representing aircraft engine control system); and

a set of expert rules stored in the configuration database (Col. 15, lines 19 – Col. 18, line 11, rules), the set of expert rules associated with the process module (Col. 15, lines 19 – Col. 18, line 11, “rules relating each sensor signal...”) and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit (Col. 15, lines 19 – Col. 18, line 11; Fig. 8, Col. 12, lines 37-53, component needing to be replaced), the set of expert rules referencing information

exposed by the process module (Col. 15, lines 19 – Col. 18, line 11, “determining from said engine sensor signals a first series of rules to be tested”).

7. A configuration system according to claim 1, wherein the expert rules are configured to cause at least one alert to be generated if a set of facts are detected by an expert engine (Fig. 8, Col. 12, lines 37-53).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2002/0022894 to Eryurek et al, hereinafter referred to as Eryurek, supplied by applicant (whole document) in view of U.S. Pat. No. 4,985,857 to Bajpai et al, hereinafter referred to as Bajpai (whole document).

Referring to claim 1, Eryurek teaches a configuration system for configuring a process control system of a process plant (paragraph 15-18), the configuration system comprising:

a configuration database to store a configuration of the process control system (Fig. 2, element 66, Fig. 3; paragraphs 29, 46, 50, 56);

a process module stored in the configuration database, the process module comprising a plurality of process objects, each process object representing a corresponding physical entity in the process plant, the process module representing a logical unit in the process plant (Figs. 1, 3; paragraphs 3, 25, 29, 30, 56).

Referring to claim 1, Eryurek fails to teach a set of expert rules stored in the configuration database, the set of expert rules associated with the process module and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit, the set of expert rules referencing information exposed by the process module. Referring to claims 4-8, Eryurek fails to teach an execution engine communicatively coupled to the configuration database, the execution engine configured to execute the process module and to apply the set of expert rules during operation of the process plant; further comprising a workstation having a processor and a computer readable memory, the workstation communicatively coupled to the configuration database; wherein the process module and the set of expert rules are stored in the computer readable memory; wherein the computer readable memory has stored therein programming instructions to configure the processor to implement the execution engine; wherein the expert rules are configured to cause at least some alerts of the process module to be disabled if a set of facts are detected by an expert engine; wherein the expert rules are configured to cause at least one alert to be generated if a set of facts are detected by an expert engine; further comprising a process graphic stored in the configuration database, the process graphic comprising a graphical representation depicting the logical unit and adapted to be displayed on a display device during execution of the process module, wherein the process graphic is configured to depict information provided by an expert engine applying the set of expert rules during operation of a process.

However, referring to claim 1, Bajpai teaches a set of expert rules stored in a configuration database (Fig. 1, KB, Abstract), the set of expert rules associated with a process module representing a logical unit in a process plant (Fig. 7, Col. 6, lines 1-13, loaded MID file representing machine; Col. 5, lines 1-40, MID machine description information and Col. 3, lines 52-58, CAD data) and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit (Col. 8, lines 20-Col. 9, lines 15, expert system diagnosis; Col. 4, lines 28-66, inference engine; Col. 13-14, fault hypothesis), the set of expert rules referencing information exposed by the process module (Col. 4, lines 28-66, MID or SID). Referring to claims 4-8, Bajpai teaches an execution engine communicatively coupled to the configuration database, the execution engine configured to execute the process module and to apply the set of expert rules during operation of the process plant (Col. 8, lines 20-Col. 9, lines 15, expert system diagnosis; Col. 4, lines 28-66, inference engine); further comprising a workstation having a processor and a computer readable memory, the workstation communicatively coupled to the configuration database; wherein the process module and the set of expert rules are stored in the computer readable memory; wherein the computer readable memory has stored therein programming instructions to configure the processor to implement the execution engine (Figs. 4-4H, Cols. 9 - Col. 36, line 59); wherein the expert rules are configured to cause at least some alerts of the process module to be disabled if a set of facts are detected by an expert engine (Col. 32, line 47 – Col. 36, line 59); wherein the expert rules are configured to cause at least one alert to be generated if a set of facts are detected by an expert engine (Col. 32, line 47 – Col.

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36, line 59); further comprising a process graphic stored in the configuration database, the process graphic comprising a graphical representation depicting the logical unit and adapted to be displayed on a display device during execution of the process module, wherein the process graphic is configured to depict information provided by an expert engine applying the set of expert rules during operation of a process (Col. 32, line 47 – Col. 36, line 59).

Eryurek and Bajpai are analogous art because they are from the same field of endeavor, process control.

At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Eryurek with the expert system taught by Bajpai.

One of ordinary skill in the art would have been motivated to combine these references because Bajpai teaches a general purpose architecture that permits it to handle different types of machines, wherein the system can diagnose problems on a state-of-the-art machine and other sophisticated machines such, and is equally effective in diagnosing problems with old machines. Bajpai further teaches the expert system is applicable to a very broad range of problems that occur in manufacturing and assembly equipment. Bajpai further teaches some of the benefits of using the expert system for diagnosing machine problems include (a) precise identification of problem components, (b) repairs prior to catastrophic failures (c) ability to schedule preventive maintenance at convenience (d) faster diagnostics process (e) distribution of the diagnostics expertise to multiple users and plants (f) improved part quality (g) longer uptimes for the machines (h) avoidance of "fixing" non-problems (i) reduced scrap (j) longer useful life of capital

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equipment through better maintenance and (k) ability to run machines unattended.

Bajpai further teaches the expert system is applicable to many different machines and is therefore general purpose and can be used for virtually all types of machines with rotating components. It serves the purpose that would have typically required building several smaller expert systems. The generality is accomplished by focusing on the components that make up individual machines rather than by looking narrowly at specific machines. With the help of this system, it is possible to perform routine and diagnostic maintenance on a large variety of machines regardless of their age and/or function. New machines can be tested for rigorous compliance of performance standards so that repairs and replacements can be performed while those machines are still under warranty. Similarly, equipment manufacturers can employ the expert system of the present invention to test their products prior to shipment. Bajpai further teaches the system is equally applicable to machines which use reciprocating components as long as the requisite knowledge is placed in the KB and consequently, a vast majority of mechanical problems typically found in manufacturing and assembly plants can be diagnosed. Bajpai further teaches the system is also capable of locating and resolving problems with electrical systems, coolant and lubricant systems and hydraulic and pneumatic systems by incorporating sensory information in addition to or in place of the vibration data. Bajpai further teaches by using permanently mounted, automatic sensors, on-line information may be linked to the SID and will permit maintenance monitoring of machines on a round-the-clock basis. Such a general purpose system may receive different types of sensory data from various strategic locations on the

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machine on a routine basis or on some alarms/thresholding basis. By adding further intelligence to the expert system, it can be made to control the polling of various sensors and the periodicity of the arrival of the sensory data. Bajpai further teaches integration with existing factory controls, and networking with plant computers and maintenance management systems is readily accomplished with the system. Bajpai further teaches Computer Aided Design (CAD) databases comprising machine descriptions may be linked to the MID, thereby making machine description and design information available for direct downloading to the MID. This would permit maintenance of a centralized MID which may be shared by several plants located over distant geographical locations (Col. 2, lines 41 – Col. 3, lines 58).

6. Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eryurek in view of Bajpai, as applied to claims 1, 4-8, above, and further in view of Blevins (whole document).

Referring to claims 3, Eryurek in view of Bajpai teaches all of the limitations set forth above, however fails to teach wherein at least some of the process objects of the process module include simulation capabilities to simulate the corresponding physical entities.

However, referring to claims 3, Blevins teaches process modeling used in process control wherein at least some of the process objects of the process module include simulation capabilities to simulate the corresponding physical entities (Col. 4, line 21 – Col. 5, line 34).

Eryurek in view of Bajpai and Blevins are analogous art because they are from the same field of endeavor, process control.

At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Eryurek in view of Bajpai with the process modeling taught by Blevins.

One of ordinary skill in the art would have been motivated to combine these references because Blevins teaches process modeling that enables a user to create an control block or module within a process control routine without having to go off-line, without having to have a lot of knowledge about how the control routine must be created, without having to perform a lot of engineering to create waveforms to generate a process model and without having to reprogram a control routine to implement model predictive or other advanced control, thus this saves time, costs and provides use of the created process model for other purposes, such as for simulation and the production of virtual process outputs within the process control environment. Furthermore, Blevins teaches the process modeling enable a user to create advanced control blocks such as MPC control blocks, neural network modeling or control blocks, etc. without having a great deal of expert knowledge about how those blocks are created and enables an operator to create and use an advanced control block without performing a lot of reprogramming of the process to implement advanced control. Furthermore, because Blevins teaches the advanced control block is created using the same programming paradigm as the other control elements within the system, the user can be provided consistent views of the process or graphical displays of the process having the

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advanced control block therein. Still further, because the process model is needed to be created for, for example, an MPC function block, this process model can be used to produce simulation function blocks which can be used to simulate the process for other purposes such as testing, training, detecting process/process-model mismatch or producing virtual outputs of the process for use in controlling a process (Col. 20, lines 45 – Col. 21, lines 18).

7. Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eryurek in view of Bajpai, as applied to claims 1, 4-8, above, and further in view of U.S. Pub. No. 2003/0028269 to Spriggs et al, hereinafter referred to as Spriggs, supplied by applicant (whole document).

Referring to claims 9, 10, Eryurek in view of Bajpai teaches all of the limitations set forth above, however fails to teach wherein the configuration database includes a library of expert rule templates; wherein the configuration database is adapted to keep track of versions of the set of expert rules.

However, referring to claims 9, 10, Spriggs teaches a configuration database includes a library of expert rule templates (paragraph 251-253); wherein the configuration database is adapted to keep track of versions of the set of expert rules (paragraph 247).

Eryurek in view of Bajpai and Spriggs are analogous art because they are from the same field of endeavor, plant management.

At time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Eryurek in view of Bajpai with the database taught by Spriggs.

One of ordinary skill in the art would have been motivated to combine these references because Spriggs teaches an industrial plant asset management system which includes a unified display environment and a common database structure for protecting and managing industrial plant assets. Furthermore, Spriggs teaches an industrial plant asset management system which is modular in design and based on a client server architecture that allows the user to configure the system as centralized, distributed, or any combination of the two. Furthermore, Spriggs teaches an industrial plant asset management system as characterized above which includes Local or Wide Area Network (LAN or WAN) support for implementing the system in a manner that takes advantage of existing network structures and philosophy for lowering installation and system maintenance costs. Furthermore, Spriggs teaches an industrial plant asset management system as characterized above which includes remote access to obtain remote services for troubleshooting both instrument and machinery problems for providing expedited problem resolution and lowered cost of services. Furthermore, Spriggs teaches a unified display environment as characterized above which includes a machinery management display that provides a unified interface to machine asset and condition information as well as the system's instrument assets and transducer or sensor assets thereby enabling the user to view the enterprise as a whole and navigate to a specific point or parameter quickly and easily. Furthermore, Spriggs teaches the unified display environment as characterized above which provides access to

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machinery and instrument asset information, such as drawings and maintenance records or reports. Furthermore, Spriggs teaches the unified display environment as characterized above which reduces user-training time and increases effectiveness as its use becomes more intuitive. Furthermore, Spriggs teaches the unified display environment as characterized above which allows the user to correlate information from multiple applications and sources into a single unified view thereby expediting problem resolution during the diagnostics process. Furthermore, Spriggs teaches an industrial plant asset management system as characterized above which incorporates multiple condition monitoring technologies as well as on-line and off-line data collection. Furthermore, Spriggs teaches an industrial plant asset management system as characterized above which includes an open architecture for taking advantage of the many utilities and tools available for today's operating systems, importing and exporting information using industry standard methods, using application components in third-party systems, and customizing the system to specific needs without the need for complex configuration and integration. Furthermore, Spriggs teaches an industrial plant asset management system as characterized above which includes parametric alarming in addition to the traditional software alarms of prior art systems thereby allowing the user to set alarms based on different modes of operation, including process conditions. Furthermore, Spriggs teaches parametric alarming as characterized above, for providing the user with the ability to customize system alarms and create simple or very complex alarming schemes. Furthermore, Spriggs teaches parametric alarming as characterized above, which includes generating internal software alarms for an alarm

list, for creating exportable alarms for third-party interfaces, and for initiating data collection for machinery monitored on-line (paragraphs 14-26).

Allowable Subject Matter

8. Claims 11-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

While Hogg teaches a configuration system for configuring a process control system of a process plant (Col. 3, lines 52-60), the configuration system comprising: a configuration database to store a configuration of the process control system; a process module stored in the configuration database (Col. 5, lines 35-64, flight data; Abstract, data includes signals indicative of operation of engine control system, and downloading flight data to diagnostic system which is an inference engine and knowledge database), the process module comprising a plurality of process objects, each process object representing a corresponding physical entity in the process plant (Abstract, data includes sensor data), the process module representing a logical unit in the process plant (Abstract, data representing aircraft engine control system); and a set of expert rules stored in the configuration database (Col. 15, lines 19 – Col. 18, line 11, rules), the set of expert rules associated with the process module (Col. 15, lines 19 – Col. 18, line 11, “rules relating each sensor signal...”) and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit (Col. 15, lines 19 – Col. 18, line 11; Fig. 8, Col. 12, lines 37-53, component needing to be replaced), the set of expert rules referencing information exposed by the process module (Col. 15,

lines 19 – Col. 18, line 11, “determining from said engine sensor signals a first series of rules to be tested”).

And, Eryurek teaches a configuration system for configuring a process control system of a process plant (paragraph 15-18), the configuration system comprising: a configuration database to store a configuration of the process control system (Fig. 2, element 66, Fig. 3; paragraphs 29, 46, 50, 56); a process module stored in the configuration database, the process module comprising a plurality of process objects, each process object representing a corresponding physical entity in the process plant, the process module representing a logical unit in the process plant (Figs. 1, 3; paragraphs 3, 25, 29, 30, 56).

And, Bajpai teaches a set of expert rules stored in a configuration database (Fig. 1, KB, Abstract), the set of expert rules associated with a process module representing a logical unit in a process plant (Fig. 7, Col. 6, lines 1-13, loaded MID file representing machine; Col. 5, lines 1-40, MID machine description information and Col. 3, lines 52-58, CAD data) and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit (Col. 8, lines 20-Col. 9, lines 15, expert system diagnosis; Col. 4, lines 28-66, inference engine; Col. 13-14, fault hypothesis), the set of expert rules referencing information exposed by the process module (Col. 4, lines 28-66, MID or SID).

Referring to claim 11, none of Hogg, Eryurek or Bajpai, taken either alone or in obvious combination disclose a system for monitoring a process control system of a

process plant, having all the claimed features of applicant's instant invention, specifically including:

“a processor; a computer readable memory; a process module stored in the computer readable memory, the process module comprising a plurality of interconnected process objects, each process object representing a corresponding physical entity in the process plant, the process module representing a logical unit in the process plant, each process object having a parameter memory storage to store parameter data corresponding to the physical entity represented by the process object, wherein at least some of the process objects of the process module include simulation capabilities to simulate the corresponding physical entities; an expert module stored in the computer readable memory, the expert module including a set of expert rules associated with the process module and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit, the set of expert rules referencing parameter data of the process module, the expert module including expert module parameters associated with evaluation of the expert rules; a process graphic stored in the computer readable memory, the process graphic adapted to provide on a user interface a graphical depiction of the logical unit, parameter data of the process module, and parameter data of the expert module; an execution engine stored in the computer readable memory and adapted to be executed by the processor, the execution engine to execute the process module during operation of the process plant and to display on the user interface the graphical depiction of the logical unit, the parameter data of the process module, and the parameter data of the expert module;

and an expert engine stored in the computer readable memory and adapted to be executed by the processor, the expert engine to apply the set of expert rules of the expert module.”

Referring to claim 17, none of Hogg, Eryurek or Bajpai, taken either alone or in obvious combination disclose a method to facilitate monitoring a process control system of a process plant, having all the claimed features of applicant’s instant invention, specifically including:

“configuring a process module, the process module comprising a plurality of interconnected process objects, each process object representing a corresponding physical entity in the process plant, the process module representing a logical unit in the process plant; configuring an expert module, the expert module including a set of expert rules associated with the process module and adapted to be applied by an expert engine to detect at least one abnormal situation associated with the logical unit, the set of expert rules referencing parameter data of the process module, the expert module including expert module parameters associated with evaluation of the expert rules; configuring a process graphic, the process graphic adapted to provide on a user interface a graphical depiction of the logical unit, parameter data of the process module, and parameter data of the expert module; storing the configured process module, the configured expert module, and the configured process graphic to a configuration database, the configuration database to store a configuration of the process control system; and downloading the configured process module, the configured expert module, and the configured process graphic to a workstation in the process plant, the

workstation adapted to implement an execution engine to execute the process module, to display the process graphic on a user interface, and to implement the expert engine during operation of the process.”

It is for these reasons that applicant’s invention defines over the prior art of record.

Response to Arguments

9. Applicant's arguments filed 9/26/08 have been fully considered but they are not persuasive.

Applicant argues that claims 1-4 and 6-10 are statutory because the database can be interpreted as hardware in one example. The examiner respectfully disagrees. The claims are broader than the arguments provided by applicant. The database can still reasonably be interpreted by one of ordinary skill in the art, in light of the instant specification (page 15, paragraph 33, pages 19-20, paragraph 39, page 44, paragraph 80, pages 56-57, paragraph 104, pages 83-84, paragraph 164, of the instant specification), to be software, such that the system comprising the module and database is software, per se. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer

element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

10. All other arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571)272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SPS
Sean P. Shechtman
January 3, 2009

/Sean P. Shechtman/
Primary Examiner, Art Unit 2121